What is claimed is:

1. A cooling device with a micro cooling fin, the cooling device comprising:

a substrate; and

a plurality of vibrating type cooling fins extending from the substrate.

2. The cooling device of claim 1, wherein the substrate is a semiconductor substrate.

3. The cooling device of claim 1 or 2, wherein each of the vibrating type cooling fins extends in parallel to the surface of the substrate.

4. The cooling device of claim 1 or 2, wherein each of the vibrating type cooling fins extends upward from the substrate at an angle.

5. The cooling device of claim 1 or 2, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

6. The cooling device of claim 3, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

7. The cooling device of claim 4, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

8. The cooling device of any one of claims 1, 2, 6 and 7, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

9. The cooling device of claim 3, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

10. The cooling device of claim 4, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

11. The cooling device of claim 5, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

12. A cooling device with a micro cooling fin, the cooling device comprising:

a substrate;

a plurality of vibrating type cooling fins extending from the substrate; and

a blast fan for ventilating the substrate to cool the substrate and the vibrating type cooling fins and for causing the vibrating type cooling fins to vibrate.

13. The cooling device of claim 12, wherein the substrate is a semiconductor substrate.

14. The cooling device of claim 12 or 13, wherein each of the vibrating type cooling fins extends in parallel to the surface of the substrate.

15. The cooling device of claim 12 or 13, wherein each of the vibrating type cooling fins extends upward from the substrate at an angle.

16. The cooling device of claim 12 or 13, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

17. The cooling device of claim 14, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

18. The cooling device of claim 15, wherein each of the vibrating type cooling fins has a resonance frequency corresponding to the flow rate of the air flowing over the substrate.

19. The cooling device of any one of claims 12, 13, 17 and 18, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

20. The cooling device of claim 14, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

21. The cooling device of claim 15, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.

22. The cooling device of claim 16, wherein a coating layer for giving stress to the surface of each of the vibrating type cooling fins is formed on the surface of the vibrating type cooling fins.